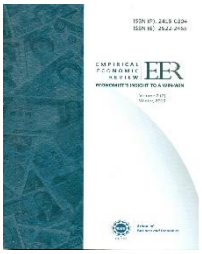

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Article: **Evaluating the Spectacle of Social Exclusion in Pakistan**

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Evaluating the Spectacle of Social Exclusion in Pakistan

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Abstract

Social exclusion is the denial of various rights, resources and opportunities to a certain group of people within the society, such as the right of the democratic participation of individuals in the society, employment opportunities and housing facilities normally available to the other members of the society. The outcome of social exclusion is a limited economic, political and social life that creates a barrier in the way of potential growth and development. This study is an attempt to find out the effects of trade liberalization and tax revenues on the socially excluded people of Pakistan and it covers the time span of 1980-2018. The auto regressive distributed lag model was applied to determine the long run and short-run relationships among the variables. The findings of the study revealed that trade liberalization and per capita income play a vital role in decreasing the level of social exclusion, while tax revenues increase social exclusion. Furthermore, the globalization of the economy is a source to increase the level of social inclusion in the country.

***Keywords*:** ARDL, social exclusion, tax revenues, trade liberalization
JEL Classification: C13; B55; E62

Introduction

Social exclusion was conceptualized by Sen (2000), while its roots go way back to the time of Aristotle. This concept was introduced in France in 1974 when Rene Lenoir used the term "Les Exclus", which refers to those segments of the society who are not able to secure their place in the salary nexus. Hence, their chances to participate in the society are limited and/or not supported by the state. The concept of social exclusion was later acknowledged and adopted throughout the European Union (EU). The ideas of poverty

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reduction and social deprivation were replaced by social exclusion in all poverty reduction programs of EU. The reason behind the growing interest in social exclusion was that it provides a deep insight into the essence of poverty, its causes and consequences. The International Labor Organization (ILO) defined social exclusion as being "a state of poverty in which individuals cannot access the living conditions which would enable them to satisfy essential needs (food, education, health) and to participate in the development of society in which they live."

Rodger, Gore, and Figueiredo (1995) argued that social exclusion is basically a concept developed in the industrialized countries where such exclusion is attached with unemployment, loss of social rights and break down of social ties. In developing countries as compared to the developed countries, social exclusion is attached with the formation of labor markets, social rights, as well as the enforcement of civil and political rights. Initially, it was believed that social exclusion is a concept developed for industrialized countries where welfare systems are more advanced and it cannot be applied in developing countries where there is extreme poverty, weak governance and minimal welfare provision.

According to Chamber (1997), deprivation has many dimensions such as social inferiority, physical weakness, physical and social segregation, incompetence and embarrassment. Barnes and Mercer (2006) attempted to distinguish between poverty, deprivation and social exclusion. Their approach suggested that "if poverty is a photograph, social exclusion is a film."

Social exclusion has gained greater attention in recent times. The determinants of social exclusion are controversial in literature. Consumption taxes (indirect taxes) are regressive which affect the poor more than the rich due to their marginal propensity to consume, while increasing income inequality and unemployment, which are the main indicators of social exclusion. Indirect taxes are the main source of tax revenues in developing countries, although they have adverse effects on the poor by decreasing their purchasing power and thus increasing income inequality, infant mortality, the number of children out of school and unemployment.

Table 1

Distinction(s) of Social Exclusion from Poverty and Deprivation

Poverty	Deprivation	Social Exclusion
It is narrow in nature	Broader concept	Broader concept
Physical needs only	Physical needs and material needs	Physical needs, material needs and societal participation
Distributional	Distributional	Distributional and relational
Static in nature	Static in nature	Dynamic in nature
Related to individuals	Related to individuals	Related to individuals and community

Source: Barnes and Mercer (2006)

Economists strongly believe that trade liberalization and capital inflows bring advantages to countries. However, theory suggests that there are distributional consequences of liberalization, especially in industrial countries, where unskilled workers may face a permanent loss of their income and skilled workers may also suffer a temporary loss of income during the period in which they strive to find alternative opportunities. The main issue is to measure the extent to which liberalization and technical advancement are to be blamed for the increase in social exclusion. The linkage between social exclusion, liberalization and taxes is somewhat complex and has various channels through which these variables interact. The first channel is the government through which liberalization affects trade via reduced tariffs and quotas, both of them decrease public revenue and hence public spending. If government spending is lower due to lower tax collection then there is bound to be less employment in the country which will increase inequality, brain drain, and child mortality. The entrepreneurial channel is another source through which these variables interact. Free trade tends to affect the prices of traded commodities due to the law of one price prevailing over traded commodities. If prices are decreased through trade, the profit of the entrepreneur is also decreased which prompts them to reduce the number of their employees, thus creating unemployment and increasing social exclusion in the overall population.

According to the definition of Browne (2011), social exclusion refers to the excluded individuals in the society based on the number of unemployed individuals, income inequality, mortality rate of infants, out of school children of primary school age and immigrants registered abroad. If we have a bird's eye view regarding social exclusion in Pakistan, the situation is not satisfactory. The current study constructed an index of social exclusion for Pakistan based on five indicators mentioned above.

The level of social exclusion in Pakistan is increasing. Hence, it is the dire need of the time to determine the factors responsible for the increased social exclusion in the country. For this purpose, the current study is an effort to explore the impact of indirect taxes and trade liberalization on socially excluded individuals in Pakistan using the data for the years 1980-2018. It is also important to investigate the impacts of globalization and indirect taxes on social exclusion in Pakistan, since Pakistan's economy is opening up to the rest of the world and its main revenue source is indirect taxes. According to the Pakistan Economic Survey, 61% of taxes are collected through indirect means. Therefore, it is necessary to find out whether these taxes contribute to the welfare of the people. The current study aims to provide directions for the policymakers using macroeconomic analyses in order to find out the consequences of indirect taxes and trade openness, if any.

Literature Review

The importance of earlier studies cannot be negated but there are only a few studies available regarding the impact of trade liberalization and taxes on social exclusion.

Ahmad, Maqbool, and Ahmad (2018) investigated the impact of indirect taxes on the economic growth of Pakistan for the time period 1974-2010. The ARDL approach was applied to find the long-run and short-run relationships among variables. The findings of the study revealed that indirect taxes deteriorate the economic growth of the country. The authors suggested to reduce the share of indirect taxes in total revenue to boost the economic growth of Pakistan.

Zahra, Tasneem, and Khalid (2016) conducted a study on social exclusion. The study strived to investigate the issue of social

exclusion faced by the labor force, which was selected on the bases of its gender and religion and as a part of the formal and informal labor market of the city of Lahore. Logit modeling technique was used to investigate the role of social exclusion and to find out the determinants of the labor force participation. The results of the study showed a strong effect of social exclusion on labor force participation and on poverty.

Ahmad, Ahmed, Mushtaq, and Nadeem (2016) conducted a study related to the social and economic determinants of revenue in Pakistan using the data for the years 1975-2012. The ARDL approach was used to determine the long-run and short-run coefficients. The authors used tax to GDP ratio as the dependent variable and tax base, tax compliance, economic activity, share of informal economy and government regime as independent variables. The study concluded that among the social and economic determinants, GDP per capita and tax compliance affect the total tax revenue positively. On the other hand, non-formal economy and a weaker tax base have an inverse relationship with tax revenues. The authors suggested that Pakistan can boost its tax collection to overcome the non-formal economy, thus widening its tax base, improving administration and by removing tax exemption to a particular pressure group.

Lustig, Pessino, and Scott (2014) conducted a study to evaluate the impact of taxes and social spending on poverty and inequality for a panel of countries including Argentina, Bolivia, Brazil, Mexico and Peru. The study used the poverty lines of US$ 2.5/day and US$ 4/day as indicators of poverty while applying the standard tax and benefit approach. The findings of the study revealed that the extent of inequality reduction induced by direct tax transfers in these countries is rather small as compared to those found in developed countries. The study also concluded that reducing the indirect tax ratio causes the inequality to reduce at a high rate.

Gokson, Ozerton, Saglam, and Zinginobuz (2008) analyzed the impact of taxes on poverty and social exclusion in Turkey. The study used two different sets of data for Turkey to examine the nexus between tax structure, poverty and social exclusion. The first data set was obtained from the Bilgic and Yen (2003), while the second

data set contained qualitative data regarding the perspectives and attitudes of Turkish citizens concerning the various sections of Turkey's taxation system such as the rule of law, transparency and efficiency. Data was obtained from primary sources through the interviews of the various groups of citizens. Quantitative results showed that indirect taxes increased poverty and inequality in Turkey because the poor have to pay a greater proportion of their income as indirect taxes. Qualitative results also revealed that individuals perceived prevailing tax structure as extremely inequitable and they expected little in return from the government for the taxes they paid.

Lee and Vivarelli (2008) conducted a study regarding the social impacts of globalization in developing countries by taking trade openness and foreign direct investment (FDI) as proxies of globalization. The study analyzed the impact of trade openness on employment, poverty and inequality in developing countries using Hecksher-Ohlin theory. The study found that the traditional H-O model and Stopler-Samulson theorem do not apply to the current wave of globalization as it has failed to reduce unemployment and inequality in developing countries. However, FDI to some extent reduced unemployment and inequality in those countries which have greater absorption capacity for FDI inflows.

Beall (2002) developed a link between globalization and social exclusion in cities using a theoretical framework. The study made a comparison between the cities of Faisalabad (Pakistan) and Johannesburg (South Africa). The study used the responses of the workers of Faisalabad Municipal Corporation and found that the effect of globalization on social exclusion is determined by the location and macroeconomic policies of a particular city. A city which is globally integrated tends to be more inclusive and less exclusive, socially.

Grant, Brenton, and Drysdale (2000) examined the linkage between globalization and social exclusion in the countries of European Union using the general equilibrium modeling for the time span of 1970-1995. The study used Hecksher-Ohlin approach to find out the impact of globalization on social exclusion. The study showed that greater trade inflows created income and employment

inequality between low-skilled workers and high-skilled workers. Furthermore, it was found that unemployment, especially long-term unemployment, is a major barometer of social exclusion.

Bardhan and Klasen (1999) explored social exclusion related to children and education. The objective of the paper was to link children education, well-being, development and social exclusion in OECD countries. The study applied Agarwal, Humphries, and Robeyns (2013) capability approach to measure social exclusion and United Nations' pact on child rights in order to identify those rights which prevent social exclusion. Applying the capability approach, the study found that the segregation of children and a differentiated school structure foster social exclusion. The study suggested that segregation and differentiation which are often related with the poor forbids them to succeed at the highest level.

All the above mentioned studies compel us to explore the dimension of social exclusion in detail with special reference to Pakistan due to the lack of any comprehensive study on this topic. Hence, this study is an effort to examine the relationship of social exclusion with trade liberalization and tax revenues. Are these sources of increasing or decreasing social exclusion in the country is a question that remains unanswered.

Methodology

The use of annual time series data makes it compulsory that all the variables used in the analysis must be stationary; otherwise, regression provides biased results. The current study used the most common method of checking the unit root known as the augmented Dickey-Fuller (ADF) test. After finding the unit root of variables, the co-integration of variables was tested. To determine the long-run and short-run relationships of the variables, autoregressive distributed lag (ARDL) technique was applied. This technique was initially developed by Pesaran, Shin, and Smith (1999, 2001) and it has several advantages as compared to other co-integration techniques, such as (Engle & Granger, 1987). The other techniques rely on only I (1) series strictly. The ARDL technique of bound testing overcomes this disadvantage of previous techniques regarding the integration of the same order. It does not impose the restriction that all the changeable should be in the same order. It is

also more efficient than other techniques with a small sample size. The ARDL methodology produces outcomes in the long-run. Moreover, the error correction model (ECM) gives short-run coefficients with a long-run equilibrium without losing the long-run coefficients. ARDL also provides short-run to long-run convergence and speed of adjustment. The model is described as follows:

$$\Delta \text{ social exclusion}_t = a_0 + B_1(\text{dper capita})_{t-1} + B_2(\text{dopenness})_{t-1} + B_3(\text{d indirect tax})_{t-1} + B_4(\text{dfdi})_{t-1} + B_5(\text{dcpi})_{t-1} + \sum_{t=1}^{p} \emptyset_i \Delta(\text{per capira})_{t-1} + \sum_{t=0}^{q} \varphi_i \Delta(\text{openness})_{t-1} + \sum_{t=0}^{q} \Upsilon_i \Delta(\text{indirect tax})_{t-1} + \sum_{t=0}^{q} \partial_i \Delta(\text{fdi})_{t-1} + \sum_{t=0}^{q} \Theta_i \Delta(\text{cpi})_{t-1} + e_t \quad (1)$$

Where, a_0 is the drift, e_t is the error term, B_i are the long-run coefficients, Δ is the first difference and p and q are optimal lag lengths. The optimal lag selection is based on the Akaike information criterion.

F-test was used to test the existence of a long-run relationship. The null hypothesis for no co- integration among the variables in equation 1 is as follows:

H_0: B1=B2=B3=B4=B5=0

It was set against the "Alternative Hypothesis" given below:

$$B1 \neq B2 = B3 \neq B4 \neq B5 \neq 0$$

F-test involves asymptotic critical bounds depending on whether the variable is I (0), I (1) or a mixture of both.

Two sets of critical values are generated; one set refers to I (0) series and the other refers to I (1) series. Critical values of I (1) refer to the upper bound, while the critical values of I (0) indicate the lower bound. The long-run coefficients are expressed as follows:

$$\text{Social Exclusion} = a_0 + \sum_{t=1}^{i=p1} \emptyset_i (\text{social exclusion})_{t-1} + \sum_{t=o}^{i=q1} \varphi_i (\text{openness})_{t-1} + \sum_{t=o}^{i=q2} \varphi_i (\text{percapita})_{t-1} + \sum_{t=0}^{i=q3} \Upsilon_i (\text{indirect tax})_{t-1} + \sum_{t=0}^{i=q4} \partial_i (\text{fdi})_{t-1} + \sum_{t=0}^{i=q5} \Theta_i (\text{cpi})_{t-1} + e_t \quad (2)$$

Lag orders were selected based on Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) before the

estimation of the model. The ARDL specification of the short-run dynamics was estimated by constructing an error correction model of the following form:

$$ECM_t = (\text{social exclusion})_{t-1}\emptyset_0 - \sum_{t=1}^{i=p1} B_1 (\text{social exclusion})_{t-1} - \sum_{t=o}^{i=q1} B_2 (\text{percapita})_{t-1} - \sum_{t=o}^{i=q2} B_3 (\text{indirect tax})_{t-1} - \sum_{t=0}^{i=q3} B_4 (\text{openness})_{t-1} + \sum_{t=0}^{i=q4} B_5 (\text{cpi})_{t-1} - \sum_{t=0}^{i=q5} B_6 (\text{fdi})_{t-1} \quad (3)$$

All the coefficients of the above short-run equation represent the model convergence to equilibrium and ∅ represents the speed of adjustment.

Empirical Analysis

The current study utilized the annual data of Pakistan for the years 1980-2018. Social exclusion was construed as the dependent variable having five dimensions (unemployment, out of school children, infant mortality, Gini coefficient and number of registered immigrants going abroad). As far as independent variables are concerned, these included indirect tax revenues as the percentage of GDP, trade liberalization (exports + imports/GDP), foreign direct investment (FDI), consumer price index (CPI), per capita income and the share of agriculture in the economy.

Unemployment rate was obtained by dividing the number of jobless persons with total labor force. The data of unemployment rate was obtained from the IMF. Indirect tax refers to a tax levied on goods and services rather than on income and profits. It is also known as the consumption tax because its burden is transferred to the ultimate consumer. The tax system of most developing countries is primarily based upon consumption taxes after the shift from trade taxes to domestic taxes. Indirect tax is the main source of tax collection in Pakistan as well. The theory of taxations states that consumption taxes affect the poor more than their rich counterparts. So, indirect taxes have a strong relationship with social exclusion, theoretically. The data of indirect taxes as the percentage of GDP was taken from the (Handbook of Statistics on Pakistan Economy, 2015). Trade liberalization can be described as the total or partial elimination of trade barriers such as quotas, import duties, tariffs and non-tariff barriers imposed by the governments on imported and exported goods. It was measured using the formula exports +

imports/GDP and it also has a strong linkage with poverty, inequality and employment. Per capita income is an economic indicator that measures the overall development. So, the GDP per capita has a strong relationship with social exclusion and it is expected to increase tax revenues and decrease social exclusion. Per capita income is calculated by dividing total income with the existing population. The data of GDP per capita was obtained from World Development Indicators and Pakistan Economic Survey 2019 (Pakistan Economic Survey, 2019).

Inflation refers to an overall increase in the general price level in a country. CPI is used as the proxy for inflation. CPI is related to change in the prices of consumer goods calculated from fixed baskets. The data of CPI was taken from WDIs and Pakistan Economic Survey 2019 (Pakistan Economic Survey, 2019). Inflation causes prices to rise which, in turn, affects the different groups of society through various channels.

Agriculture is the backbone of Pakistan's economy. The share of agriculture in the GDP indicates the overall contribution of the agriculture sector in the country's productive system. The data of agriculture was taken from the (Handbook of Statistics on Pakistan Economy, 2015; Pakistan Economic Survey, 2019).

Social exclusion refers to the excluded individuals in the society based on the number of unemployed individuals, inequality, mortality rate of infants, out of school children of primary school age and immigrants registered abroad. The current study followed the definition of social exclusion given by Browne (2011). Moreover, social exclusion index (SEI) was constructed by applying the principle components analysis (PCA) of five variables out of 24 variables due to the limitations regarding the availability of data in Pakistan. After collecting data, the current study constructed the SEI through PCA by combining all variables into one variable without the loss of data. PCA is a statistical data analysis technique normally used to minimize a large number of interrelated variables into a single variable. The advantage of PCA is that it retains as much of the information as possible during this process.

Trade brings FDI inflows in developing countries which helps to create awareness along with introducing technological

advancements. Awareness is helpful in the protection of social rights. Indirect taxes reduce the purchasing power of the people by reducing their income. Hence, they have fewer opportunities to participate in the society's decision-making process which increases social exclusion.

The stationarity of the variables is mandatory in the time series analysis. For this purpose, augmented Dickey-Fuller Test (ADF) was applied to test the stationarity of the variables. The results are reported in the following Table 2.

Table 2

Unit Root Results

Variables	ADF Test without Trend P values		ADF Test with Trend P values	
	At level	1st difference	At level	1st difference
Per Capita Income	0.854	0.0001**	0.891	0.0001**
Trade Openness	0.527	0.0000**	0.511	0.0000**
Foreign Direct Investment	0.048	0.0030**	0.137	0.016**
Social Exclusion	0.624	0.0000**	0.571	0.0000**
Indirect Tax	0.611	0.0000**	0.627	0.0000**
Consumer Price Index	0.127	0.0000**	0.195	0.0000**
Agriculture % GDP	0.423	0.0000**	0.359	0.0000**
Ramsay Reset Test Results	F Statistics 0.0057		Fitted square 0.0476	

** represents significance at 5 percent.

The above table shows that all the variables are stationary at first difference, so we can apply the ARDL technique to find out the long-run and short-run relationships between variables. Ramsay

reset test results show that the relationship is significant and nonlinear.

F-test was used to determine the existence of a long-run relationship. Table 3 shows the bound testing results regarding the existence of a long-run association among social exclusion, trade liberalization, indirect taxes, foreign direct investment, per capita income and consumer price index. The upper bound values are 3.28 and 2.94 at 5% and 10%level respectively, while the deliberate F-Statistics value is 10.94727. So, the calculated F-statistics value is greater than the upper bound values which shows the existence of a long-run relationship.

Table 3

F-Bounds Test

Significance	Lower Bound Value	Upper Bound Value	F-Calculated
10%	1.99	2.94	
5%	2.27	3.28	
2.5%	2.55	3.61	4.2342
1%	2.88	3.99	

Following the outcomes of the bound test, a long-run relationship was established between the variables. So, ARDL was applied using 3 lags based upon the AIC and SIC criteria. The long-run results are given in Table 4.

Table 4

Estimated Long-run Results

Variable Name	Coefficient	Std. error	T-ratios	Probability
Per Capita Income	-1.266	2.066	-6.421	0.000***
Openness/GDP	-0.344	0.125	-2.837	0.012***
Indirect tax/GDP	0.464	0.184	2.515	0.020***
FDI/GDP	0.432	0.231	1.868	0.076**
CPI	0.274	0.064	4.233	0.004***
Agriculture/GDP	-0.440	0.205	-2.140	0.044***
Constant	51.749	12.265	4.220	0.004***

***indicates 1% level of substance, **indicates 5% level of substance, *10% level of substance

The results revealed that the GDP per capita has a significant role in reducing social exclusion in the country. As economic activities increase, people have more opportunities to enjoy the economic pie and have more awareness regarding how to be an effective part of the economic system. Trade openness also plays a vital role in reducing social exclusion. The coefficient of openness shows that a one unit increase in trade openness reduces social exclusion by -0.344 units.

FDI has a positive impact on social exclusion in the country. These results are supported by the findings of (Beall, 2002; Lee & Vivarelli, 2008; Gupta, 2007) who argued that larger inflows cause inequality and unemployment to rise in those countries which have a low absorption capacity for FDI inflows.

Indirect taxes also have a positive impact on social exclusion in Pakistan. The results revealed that if indirect taxes increase by one unit then social exclusion increases by 0.46 units. These results are also in line with the studies of (Gokson et al., 2008; Lustig, Pessino & Scott, 2014) which showed that indirect taxes increase poverty, income inequality and social exclusion. The possible reason may be that the poor have to pay a larger proportion of their income as indirect taxes as compared to the rich

CPI also affects social exclusion in the country positively. These results are supported by the theory of taxation, which states that as indirect or consumption taxes increase, the prices of consumer goods also increase affecting the poor severely.

The share of agriculture in the GDP has a negative impact on the dependent variable, that is, social exclusion. As the share of agriculture in the GDP goes up, social exclusion goes down. These results are not in line with the modern growth theories of development, which state that for a country to develop, it must shift from agriculture to industry and from industry to services. A possible reason is that Pakistan's economy is basically an agricultural economy, where almost 65% of the population and 42% of the labor force is associated with agriculture. As the agriculture sector flourishes, the people associated with this sector enjoy a better living standard and are able to procure the necessities of life.

After determining the long-run relationship, ECM was applied to determine the short-run relationship. The outcomes of ECM are given below in Table 5.

Table 5

Error Correction Representation of ARDL

Variable	Coefficient	Standard error	T-Ratios	Probability
D(Per Capita)	-7.318	1.799	-4.066	0.006***
D(Social Exclusion)	-0.719	0.166	-4.311	0.003***
D(Openness)	-0.198	0.038	-5.162	0.000***
D(Indirect Tax)	0.334	0.095	0.123	0.013*
D(FDI)	1.032	0.164	6.295	0.000***
D(CPI)	0.0742	0.019	3.792	0.001***
D(AGRI)	-0.333	0.164	-2.034	0.055**
Cont Eq(-1)*	-0.719	0.106	-6.762	0.000***
R-Squared	R-Bar-Squared			DW statistics
0.978	0.963			2.314

***, **, * indicates significance at 1, 5, 10 percent respectively.

ECM manifests the convergence from the short-run to the long-run with a small change in social exclusion, indirect taxes, trade liberalization, foreign direct investment and consumer price index. All the variables in the short-run are significant at 5% level. The error correction term shows that the speed of adjustment from the short-run to the long-run equilibrium is 71%.

Some diagnostic tests were applied to determine the robustness of the model. The results are reported in the following Table 6.

Table 6

Diagnostic Tests

Test Statistics	F Statistics	Probability (F-Statistics)
Serial Correlation LM test	1.965239	0.1691
Breach-Pagan Hetroscedasticity Test	1.2987	0.2894
Jarque-Berra test of Normality	Not applicable	0.9024

The findings of the tests showed that there is no issue of serial correlation and heteroscedasticity and the residuals are normally distributed.

Conclusion and Policy Implications

The current study empirically tested the macroeconomic perspective of the impacts of globalization and taxation on social exclusion in Pakistan. The main objective of this paper was to show how trade liberalization and indirect taxes affect the socially excluded people in the country by employing the annual data for the years 1980-2018. The ARDL approach was applied to find out the long-run and short-run relationships among the variables.

The empirical findings of the model proved that indirect taxation increases the number of socially excluded people because indirect taxes increase income inequality and unemployment, which in turn increase the infant mortality rate and reduce the percentage of children attending school. These results are in line with the existing body of literature available on indirect taxes and social exclusion.

The impact of trade liberalization also shows that globalization reduces income inequality between trading countries, which in turn reduces unemployment and inequality between the residents of the trading countries. Moreover, FDI in Pakistan is a means to increase social exclusion in the country based on the findings of the current study. A possible reason behind this fact is that the effectiveness of FDI depends upon a country's absorption capacity. Pakistan is a developing country and it has lesser capacity to absorb FDI inflows and to make these inflows productive due to the lack of technical skills and technology.

Per capita income is traditionally known as a good alternate for the well-being of the population. An increased per capita significantly reduces the number of socially excluded people in the society. The current study also shows the importance of the agriculture sector in Pakistan's economy. The findings showed that as the share of the agriculture sector in the GDP increases, social exclusion correspondingly decreases. The importance of this sector cannot be negated because a large proportion of the population is

still connected with it. Several diagnostic tests signify the robustness of the current study.

It is suggested here as a policy guideline that trade liberalization is a means to increase tax revenues and these revenues may help to increase the welfare of the people. Moreover, indirect taxation hurts the people by decreasing their purchasing power and squeezing their economic choices. So, it is imperative to revise the existing tax structure and a type of system is needed that may reduce the tax burden of the low-income people. More efforts are needed to uplift the agriculture sector, as the majority of the labor force is associated with this sector, so that its living standard may improve.

References

Ahmad, H. K., Ahmed, S., Mushtaq, M., & Nadeem, M. (2016). Socio economic determinants of tax revenue in Pakistan: An empirical analysis. *Journal of Applied Environment and Biological Sciences*, *6*(2S), 32−42.

Ahmad, S., Maqbool, S., & Ahmad, N. (2018). Indirect taxes and economic growth: An empirical analysis of Pakistan. *Pakistan Journal of Applied Economics*, *28*(1), 65−81.

Agarwal, B., Humphries, J., & Robeyns, I. (Eds.). (2013). *Amartya Sen's work and ideas: A gender perspective*. Routledge.

Barnes, C., & Mercer, G. (2006). Independent Futures. Creating user-led disability services in a disabling society. Scandinavian Journal of Disability Research, *8*(4), 317−320. https://doi.org/10.1080/15017410600973523

Bardhan, K., & Klasen, S. (1999). UNDP's gender-related indices: A critical review. *World Development*, *27*(6), 985−1010. https://doi.org/10.1016/S0305-750X(99)00035-2

Beall, J. (2002). Globalization and social exclusion in cities: Framing the debate with lessons from Africa and Asia. *Environment and Urbanization*, *14*(1), 41−51. https://www.files.ethz.ch/isn/138255/WP27.pdf

Bilgic, A., & Yen, S. T. (2013). Household food demand in Turkey: A two-step demand system approach. *Food Policy*, *43*, 267−277. https://doi.org/10.1016/j.foodpol.2013.09.004

Browne, S. (2011). *The United Nations Development Programme and System* (Vol. 57). Routledge.

Chambers, R. (1997). *Whose Reality Counts? Putting the First Last. Intermediate Technology Publications*, London.

Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica: journal of the Econometric Society*, *52*(2), 251−276. https://doi.org/10.2307/1913236

Gökşen, F., Özertan, G., Sağlam, İ., & Zenginobuz, Ü. (2008). Impacts of the tax system on poverty and social exclusion: A case study on Turkey. *New Perspectives on Turkey*, *38*, 159−179. https://doi.org/10.1017/S0896634600004969

Gupta, S. A. (2007). *The determinants of tax revenue efforts in developing countries* (IMF Working Paper No. 07−184). Washington, DC: IMF.

Grant, G., Brenton, J., & Drysdale, D. (2000). Fire suppression by water sprays. *Progress in energy and combustion science*, *26*(2), 79−130. https://doi.org/10.1016/S0360-1285(99)00012-X

Handbook of Statistics on Pakistan Economy. (2015). State Bank of Pakistan, Karachi. https://www.sbp.org.pk/departments/stats/PakEconomy_HandBook/index.htm

Lee, E., & Vivarelli, M. (2008). Globalization, employment and income distribution in developing countries. *Journal of Economics*, *93*(3), 311−317. 10.1007/s00712-007-0294-y

Lustig, N., Pessino, C., & Scott, J. (2014). The impact of taxes and social spending on inequality and poverty in Argentina, Bolivia, Brazil, Mexico, Peru, and Uruguay: Introduction to the special issue. *Public Finance Review*, *42*(3), 287−303. https://doi.org/10.1177/1091142113506931

Pakistan Economic Survey. (2019). http://www.finance.gov.pk/survey_1920.html

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American statistical Association*, *94*(446), 621−634.

Pesaran, H., Smith, R., & Shin, Y. (2001). Bound Testing approaches to the analysis of level relationship. *Journal of Applied Econometrics, 16.* 289−326. https://doi.org/10.1002/jae.616

Rodgers, G., Gore, C., & Figueiredo, J. B. (Eds.). (1995). *Social exclusion: Rhetoric, reality, responses*. Geneva: International Institute for Labour Studies. http://www.ilo.org/public/libdoc/ilo/1995/95B09_55_engl.pd

Sen, A. (2000). *Social exclusion: Concept, application, and scrutiny*. Asian Development Bank. https://www.think-asia.org/handle/11540/2339

Zahra, K., Zafar, T., & Khalid, M. (2016). Marginality, social exclusion, labour force participation and urban poverty: a case study of Lahore, Pakistan. *The Pakistan Development Review*, *55*(4), 521−540. https://www.jstor.org/stable/44986002